

What is Claimed is:

1. A method of separating a mixture of proteins in a biological sample comprising:

(a) mixing the biological sample with a solution comprising a sulfhydryl reducing agent, an anionic detergent, and at least one detergent selected from the group consisting of an ionic detergent, a non-ionic detergent and a zwitterionic detergent, at concentrations sufficient to substantially denature albumin in the mixture; and

(b) subjecting the mixture of biological sample and solution to a separation technique to separate proteins in the mixture.

2. The method of claim 1 further comprising characterizing the separated proteins.

3. The method of claim 2 wherein the separated proteins are characterized by Western blot.

4. The method of claim 1 wherein the biological sample comprises serum.

5. The method of claim 1 further comprising heating the mixture from step (a) prior to separation in step (b).

6. The method of claim 5 wherein the mixture is boiled.

7. The method of claim 1 wherein said separation technique is performed using SDS-PAGE.

8. The method of claim 1 wherein the anionic detergent is sodium dodecyl sulfate.

9. A kit for separating a mixture of proteins in a

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accordance with the method of claim 1; and

(b) characterizing proteins so as to produce a profile of proteins in said biological sample.

17. The method of claim 16 wherein the separated
5 proteins are characterized by Western blot.

18. A method for detecting myocardial damage in a subject comprising detecting a myofilament protein in serum of the subject by Western Blot-Direct Serum Analysis.

19. The method of claim 18 wherein detection of the
10 myofilament protein in the serum of the patient provides an early clinical assessment or diagnosis of myocardial damage.

20. A method for clinically assessing or diagnosing in a subject myocardial damage prior to detection by electrocardiogram or routine clinical testing showing
15 significant elevations of biochemical cardiac markers in the subject, said method comprising detecting by Western Blot-Direct Serum Analysis a myofilament protein in serum of the subject.

21. A method for monitoring the state of the myocardium
20 in a subject, said method comprising monitoring myofilament protein modifications in serum of the subject by Western Blot-Direct Serum Analysis.

22. The method of claim 21 wherein monitoring is performed prior to detection by electrocardiogram or routine
25 clinical testing showing significant elevations of biochemical cardiac markers in the subject.

23. A method for assessing severity of skeletal muscle damage in a subject comprising measuring a ratio of two

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